MACPHERSON
OIL COMPANY

4640 ADMIRALTY WAY, SUITE 525
MARINA DEL REY, CALIFORNIA 90291
213 823 7995

P.O. BOX 5368
BAKERSFIELD, CALIFORNIA 93388
805 393 3204

February 15, 1984

Al Hluza, Deputy Supervisor
Department of Conservation
Division of Oil & Gas
4800 Stockdale Hwy., Suite 417
Bakersfield, Ca 93309

Re: Olcese Injection
Mt. Poso Field

Gentlemen:

On April 4, 1983, the Division of Oil & Gas served notice on Macpherson Oil Company to cease injection into the Olcese zone in the Mt. Poso field effective September 14, 1984. (Enclosure 1) In your notice you described that new regulations have been imposed on water injection into certain zones for the protection of "Class 2 drinking water".

Macpherson Oil Company currently has 3 water injection wells in the Olcese zone in the Mt. Poso and West Mt. Poso field. (Enclosure 2). The economic impact of this notice on Macpherson Oil Company leases is severe enough to render the lease uneconomic to produce if we comply. The estimated additional cost of disposing of water from our presently producing wells by alternative means complying with existing requirements will exceed $500,000 this year.

We decided to conduct a study of the water integrity of the Olcese sands zone in the Mt. Poso field. We employed an independent petroleum geologist, Frank Mondary, to sample water from the Olcese zone from Macpherson Oil Company well Tribe A-6 Sec. 28 T27S R28E. (Enclosure 3). Mr. Mondary also conducted a brief study of other wells owned by other companies in the Mt. Poso field which may have taken core samples of the Olcese sand zone.

The results of the samples from well Tribe A-6 indicated that the water integrity in the Olcese sand qualified the water as Class 3 (unsafe for human consumption or agricultural use),

rather than Class 2. Secondly, core samples found in Shell Oil Company's well Vedder 12-15 Sec. 9 T27S R28E indicated that the Olcese sand zone is oil bearing and contains water unsuitable for human or agricultural use, thus, the implimentation of the new restriction will serve no useful purpose, will not protect drinking water, public health, or any other ligitimate interest, will cost us more than $500,000 for nothing, will effectively eliminate several hundred barrels per year of worthwhile production for no good reason. Therefore, we hereby appeal your decision requiring Macpherson Oil Company to cease injection into the Olcese sand zone in the Mt. Poso field, and we hereby request the exemption of the Olcese sand zone aquifer from the new regulations referred to in your letter of April 4, 1983.

Very truly yours,

Donald R. Macpherson, Jr.
Vice President
Macpherson Oil Company

DRM:ck

Enclosures

STATE OF CALIFORNIA — RESOURCES AGENCY

ENCLOSURE 1

EDMUND G. BROWN JR., Governor

DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS
520 KENTUCKY STREET
BAKERSFIELD, CALIFORNIA 93305
(805) 322-4031

Mr. Donald R. Macpherson, Jr.
MACPHERSON OIL CO.
P.O. Box 5368
Oildale, CA. 93388

April 4, 1983

Gentlemen,

On March 14, 1983, the California Division of Oil and Gas recieved primacy over Class II injection wells under the Federal U.I.C. program. This primacy enables the D.O.G. to retain regulatory control over the reinjection of produced oilfield water with certain imposed restrictions and changes. Among these restrictions are non-exempt aquifers which have previously been approved for injection.

Under the new regulations, all injection into these non-exempt aquifers must cease by September 14, 1984. One of these zones is the Olcese zone in Mount Poso field for which our records show you have a currently approved water disposal project.

Should you wish to appeal this decision by requesting aquifer exemption, you may submit an application addressing the attached list of requirements to this office. Your application will then be forwarded to the Environmental Protection Agency for review and decision. Should you choose not to file this information, all injection into the Olcese zone in Mount Poso field must be terminated prior to the September 14, 1984 deadline date.

If you have any questions, please contact this office.

Yours Truly,

A. G. Hluza
Deputy Supervisor

By David Mitchell
Associate Oil & Gas Engineer

ENCLOSURE 3

MONDARY OPERATING CO., INC.

PETROLEUM - EXPLORATION & DEVELOPMENT

RECEIVED
FEB 16 1984
DIVISION OF OIL & GAS
BAKERSFIELD

1999 E. Edison Hwy., Suite 26, Bakersfield, California 93305
Phone: (805) 323-4441

FLUID SAMPLING OF OLCESE ZONE IN MACPHERSON OIL COMPANY TRIBE A-6, SECTION 28 T.27S., R.28E., M.D.B.&M. MT. POSO OIL FIELD KERN COUNTY, CALIFORNIA

FEBRUARY 5, 1984

BY: F. P. MONDARY PETROLEUM GEOLOGIST
CALIFORNIA REGISTRATION #2684

LIST OF EXHIBITS

MAP EXHIBIT	LOCATION OF TRIBE A-6 IN MT. POSO OIL FIELD
EXHIBIT A	SWAB & BAILER FLUID RUNS
EXHIBIT B	ZALCO LABORATORY ANALYSIS OF RECOVERED WATERS FROM MACPHERSON OIL COMPANY TRIBE A-6
EXHIBIT C	UNITED STATES HEALTH DEPARTMENT STANDARDS
EXHIBIT D	MACPHERSON OIL COMPANY A-6 WELL DATA
EXHIBIT E	SHELL OIL COMPANY VEDDER 12-15 MT. POSO OIL FIELD SECTION 9, T.27S., R.28E., M.D.B.&M.

MONDARY OPERATING CO., INC.

PETROLEUM - EXPLORATION & DEVELOPMENT

1999 E. Edison Hwy., Suite 26, Bakersfield, California 93305

Phone: (805) 323-4441

Mr. Don Macpherson, Jr.
Macpherson Oil Company
P. O. Box 5368
Oildale, California 93388

Dear Mr. Macpherson;

At your request, I supervised the recent fluid sampling of entry fluids into the Macpherson Oil Company Tribe A-6 well for the purpose of collecting well fluids from the Olcese zone. Map Exhibit #A indicated the geographic location of subject well in the Mt. Poso Oil Field. The well is located on the Macpherson Oil Company Tribe A lease consisting of 160 acres in the E½ of the E½ of Section 28, T.27S., R.28E., M.D.B.&M.

Since 1974 Macpherson Oil Company has been injecting produced oil field vedder zone water into the Olcese zone at Mt. Poso Oil Field with approval from the California Division of Oil & Gas and California State Water Resources Control Board by interagency agreements. Each injection plan submitted by Macpherson Oil Company included a detailed engineering study and geologic study as outlined in Pages 2 &

3 of the Application for Primacy in the Regulation of Class II Injection Wells Under Section 1425 of the Safe Drinking Water Act April 1981.

On March 14, 1983 the California Division of Oil & Gas received primacy over Class II injection wells under the Federal U.I.C. program and imposed restrictions on nonexempt aquifers which had previously been approved for injection. Under the new regulations, all injection into Olcese zone at Mt. Poso field must be terminated prior to September 14, 1984, deadline date. Because of the above cited reasons, collection of data to investigate Olcese conditions was initialed by Macpherson Oil Company.

The Macpherson Oil Company Tribe A-6 fluid sampling period was from April 1983 until June 1983. During that time 96 swab and fluid bailer runs were made. Each run was witnessed and tabulated. Samples were collected in glass containers for determination of oil and greases and into polyurethane containers for Boron determinations. In every run oily, watery fluid was sampled from the Olcese zone. Laboratory analysis of the sampled fluids is attached as Exhibit #B. Analysis indicates retained hydrocarbons at unacceptable levels pursuant to Public Health Standards. The United States Public Health Standards require hydrocarbons to be less than 1 ppm.

Boron was determined to be above acceptable levels for surface usage. Boron sampled was 2.194 ppm placing these Olcese waters into Class III water as established by the United States Public Health Service Drinking Water standards. Exhibit #C Table A-3 indicates the minimum standards.

In addition, well file records at the Bakersfield California Division of Oil & Gas further indicate the Olcese zone is petroliferous at Mt. Poso. Exhibit #E records of the Shell Oil Company vedder #12-15 well drilled by Shell Oil Company in the Mt. Poso Field was a primary Olcese zone oil objective. THe well was drilled and sidewall cored in May 1970 and found to contain considerable hydrocarbons in the Olcese. The attached Sidewall Core Record indicated every Olcese core contained hydrocarbons. Shell Oil Company Reserves Department at Bakersfield, California indicated a #3 in the % oil column was 85%+ oil staining.

Other wells drilled through the Olcese sands encountered oil showings in the mud system. Once such example was the Montara Petroleum Company Tribe "B" 65-28 located in Mt. Poso. This well encountered good oil shows at 300' to 350'. Showings were witnessed by Mr. John Sowers. Excellent shows at 530' to 580' were recorded by Mr. Don Dahlquist owner of Dahlquist Drilling Company. Mr. Dahlquist has drilled over 600 oil wells and is well qualified to determine oil shows on and in the mud

system.

The above cited wells and conditions are evidence the Olcese sands do contain hydrocarbons and Borons above limits established by the Public Health Services and California State levels where sampled and evaluated.

Very truly yours,

F. P. Mondary, California
Registered Petroleum Geologist #2684

EXHIBIT A

TRIBE A 6

6/28/83

Swab cup runs

RUNS	Fluid Level	Fluid pulled from	Sample
68	450	500	yes
69	450	500	
70	450	500	
71	450	500	
72	450	500	
73	450	500	yes
74	450	500	
75	450	500	
76	450	500	
77	450	500	
78	450	500	yes
79	450	500	
80	450	500	
81	450	500	
82	450	500	
83	450	500	yes
84	450	500	
85	450	500	
86	450	500	
87	450	500	
88	450	500	yes
89	450	500	
90	450	500	
91	450	500	
92	450	500	
93	450	500	yes

EXHIBIT A

TRIBE A-6

4/28/83 FLUID BAILER RUNS

RUNS	FLUID LEVEL	
#1	445'	Sample taken
#2	450'	
#3	455'	
#4	460'	
#5	465'	Sample
#6	470'	
#7	475'	
#8	485'	
#9	495'	
#10	505'	Sample
Wait 30 mins.		
#11	505'	

5/12/83 Swab cup runs = 1½ min. per run

Runs	Fluid Level	Fluid pulled from	
#12	460'	494'	Sample
#13	470'	494'	Sample
#14	470'	494'	
#15	470'	494'	
#16	470'	494'	Sample
#17	470'	494'	
#18	470'	494'	
#19	470'	500'	
#20	470'	500'	
#21	470'	500'	
#22	470'	500'	Sample
#23	470'	500'	
#24	470'	500'	
#25	470'	500'	
#26	470'	500'	
#27	470'	500'	
#28	470'	500'	
#29	470'	500'	
#30	470'	500'	
#31	470'	500'	
#32	470'	500'	Sample
#33	470'	500'	
#34	470'	500'	
#35	470'	500'	
#36	470'	500'	
#37	470'	500'	
#38	470'	500'	

EXHIBIT A

Wait 3½ Hrs. & resume swab runs

	Runs	Fluid Level	Fluid pulled from	
	#39	450'	500'	Sample
	#40	460'	500'	
	#41	460'	500'	
	#42	470'	500'	
	#43	470'	500'	
	#44	470'	500'	
	#45	470'	500'	
	#46	470'	500'	
	#47	470'	500'	Sample
6/13/83	#48	450'	500'	Sample
	#49	450'	500'	
	#50	450'	500'	
	#51	450'	500'	
	#52	460'	500'	Sample
	#53	460'	500'	
	#54	460'	500'	
	#55	460'	500'	
	#56	470'	500'	
	#57	470'	500'	Sample
	#58	470'	500'	
	#59	470'	500'	
	#60	470'	500'	
	#61	470'	500'	Sample
	Wait 40 min. & resume swabing			
	#62	460'	500'	Sample
	#63	460'	500'	
	#64	460'	500'	
	#65	460'	500'	
	#66	460'	500'	
	#67	460'	500'	Sample

EXHIBIT B

RECEIVED
FEB 16 1984
DIVISION OF OIL & GAS

ZALCO LABORATORIES, INC.

Analytical & Consulting Services

MacPherson Oil Co.
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 8623
Date Received: 4-28-83
Date Reported: 5-5-83

Attention: Gordon Skeels/Frank Mondary

Sample: Water/Oil

Sample Description: Tribe A-6 4-28-83

Analysis of water portion:		#1	#4
pH		8.18	8.23
Electrical Conductivity @ 25 °C, millimhos/cm		1.281	0.991
Boron, B	mg/l	4.8	4.0
Total Dissolved Solids	mg/l	905	605
Salinity, grains/gal		25.5	19.0
Oil & Grease	mg/l	2452	828

Jim Etherton
Laboratory Director

JE/sw
copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

EXHIBIT B

Mac Pherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 8726
Date Received: 5-13-83
Date Reported: 5-19-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe A-6 4-28-83

	Sample 2 Run 5	Sample 3 Run 10
pH	7.90	8.04
Electrical Conductivity @ 25 °C, millimhos/cm	1.23	1.04
Boron, B mg/l	1.68	1.62
Total Dissolved Solids, mg/l	805	670
Salinity as NaCl, grains/gal	12.8	12.1
Specific Gravity @ 60 °F	1.000	1.000
Total Oil & Grease mg/l	431	1045

Jim Etherton
Laboratory Director

JE/sw
copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

ZALCO LABORATORIES, INC.

Analytical & Consulting Services

EXHIBIT B

Mac Pherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 8721
Date Received: 5-12-83
Date Reported: 5-19-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe A-6 5-12-83

Sample number:	12	16	32
pH	7.62	7.66	7.87
Electrical Conductivity @ 25 °C, millimhos/cm	1.56	1.54	1.49
Boron, B mg/l	1.62	1.62	2.00
Total Dissolved Solids, mg/l	955	900	995
Salinity as NaCl, grains/gal	6.8	6.7	6.3
Specific Gravity @ 60 °F	1.001	1.001	1.001
Total Oil & Grease, mg/l	105	102	108

Jim Etherton
Laboratory Director

JE/sw

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

ZALCO LABORATORIES, INC.

Analytical & Consulting Services

EXHIBIT B

Mac Pherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 8728
Date Received: 5-13-83
Date Reported: 5-19-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe A-6 5-12-83

Sample number:	40	42	45	47	49
pH	7.85	7.94	8.02	8.01	7.96
Electrical Conductivity @ 25 °C, millimhos/cm	1.50	1.52	1.52	1.51	1.51
Boron, B, mg/l	2.14	1.66	1.76	1.50	1.66
Total Dissolved Solids, mg/l	995	965	965	930	1000
Salinity as NaCl, grains/gal	6.8	7.0	6.7	6.9	6.5
Specific Gravity @ 60 °F	1.0002	1.0002	1.0001	1.0003	1.0004
Total Oil & Grease, mg/l	217.6	437.4	525.5	227.6	114.9

John Zaletel

John Zaletel, Ph.D.
Manager

JZ:dt

copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

EXHIBIT B

MacPherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 8934
Date Received: 6-14-83
Date Reported: 6-21-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe 6-A	52	57	62
pH	8.03	8.01	7.99
Electrical Conductivity @ 25 °C, mmho/cm	1.56	1.39	1.43
Boron, B mg/l	1.76	2.08	1.78
Total Dissolved Solids, mg/l	1080	890	895
Salinity as NaCl, grains/gal	235.6	170.1	176.6
Specific Gravity @ 60 °F	1.001	1.000	1.000
Total Oil & Grease mg/l	67.8	91.2	127.0

Jim Etherton
Laboratory Director

JE/sw
copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

ZALCO LABORATORIES, INC.

Analytical & Consulting Services

EXHIBIT B

Mac Pherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 9038
Date Received: 6-28-83
Date Reported: 7-11-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe 6-A 6-28-83	68	83	93
pH	8.03	8.21	8.28
Electrical Conductivity @ 25 °C, mmho/cm	1.69	1.65	1.47
Boron, mg/l	2.3	2.0	1.9
Total Dissolved Solids, mg/l	1010	990	1035
Salinity as NaCl, grains/gal	10.6	11.0	6.8
Specific Gravity @ 60 °F	1.004	1.004	1.003
Total Oil & Grease, mg/l (Water only)	17.5	39.2	8.0

Note: Please send a glass bottle, 500 ml, for Oil & Grease testing.

Jim Etherton
Laboratory Director

JE:dt
Copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

EXHIBIT B

Analytical & Consulting Services

Mac Pherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

Laboratory No: 9167
Date Received: 7-15-83
Date Reported: 7-21-83

Attention: Gordon Skills

Sample: Water

Sample Description: Tribe 6-A 6-28-83 #88

pH	7.77
Electrical Conductivity @ 25 °C, mmhos/cm	1.61
Boron, mg/l	3.8
Total Dissolved Solids, mg/l	1105
Salinity as NaCl, grains/gal	10.1
Specific Gravity @ 60 °F	1.001
Total Oil & Grease, mg/l	239

Jim Etherton
Laboratory Director

JE/sw
copy: Frank Mondary

2845 Standard Street/No. 2 Bakersfield, California 93308
(805) 395-0539

EXHIBIT C

TABLE A-3

QUALITATIVE CLASSIFICATION OF IRRIGATION WATERS

Chemical properties	Class 1 Excellent to good (Suitable for most plants under any conditions of soil and climate)	Class 2 Good to injurious (Possible harmful for some crops under certain soil conditions)	Class 3 Injurious to unsatisfactory (Harmful to most crops and unsatisfactory for all but the most tolerant)
Total dissolved solids			
In ppm	Less than 700	700-2,000	More than 2,000
In conductance, ECx10^6	Less than 1,000	1,000-3,000	More than 3,000
Chloride ion concentration			
in milliequivalents per liter	Less than 5	5- 10	More than 10
in ppm	Less than 175	175- 350	More than 350
Sodium in percent of base constituents	Less than 60	60- 75	More than 75
Boron in ppm	Less than 0.5	0.5- 2.0	More than 2.0

GENERAL LIMITS FOR SURFACE DISPOSAL OVER FRESH WATER BASINS.

EC < 1000 μmohs/cm

CHLORIDE < 200 ppm

BORON < 1.0 ppm

EXHIBIT D

MACPHERSON OIL COMPANY TRIBE A-6

SECTION 28, T27S, R28E, MDB&M

DRILLED: 1929 & completed as producer from Vedder Sand

COMPLETION: 10-3/4" CMI 1658' 45#
Liner 8-5/8" 1533' to 1679' 36# 80M perfs 1679' to 1650'

REWORK: To obtain water sample from Olcese sands

DATE: 2/6/75

PROGRAM:

1. Run bailer to bottom.
2. Run Go-Neutron log.
3. Set wire line bridge-plug at 550' (temporary plug).
4. Jet two 1/2" H/F into Olcese sand @ 491'.
5. Bail water for analysis.
6. Top Olcese approximately 400'.

OLCESE WATER ANALYSIS:

2/26/75	Boron(ppm)	E.C.	NACl(PPM)
Sample #1	0.08 ppm	1300	759
Sample #9	3.52 ppm	1900	1104

RECEIVED
FEB 19 1971
DIVISION OF OIL & GAS

EXHIBIT E

SHELL OIL COMPANY
DIVISION

SIDEWALL CORE RECORD

FEB 16 1984
DIVISION OF OIL & GAS
DALY CITY

029-11208

Date 5-8-1970 Section 9 Twsp. 27S Rge. 28E SB. & M. MDB & M.

Type Sidewall Sampler Schlumberger Area or Field MT. POSO

Cores Examined By N. DOGAN Well "Vedder" 12-15

DEPTH	REC	RUN	DESCRIPTION *	LITH SYMB	OIL SHOWS **									
							Sample Oil Fluor.			Cut		Summary	
					% Oil Stain	Hydro-carbon Odor	%	Inten.	Color	Color of Cut	Color of Cut Fluor.	Show No. Avg.	Show Symb
132			CLAYEY SILTSTONE: V. MICACEOUS, GRAY, V. FAINT HC odor.		0								
172			OSS: (DESATURATED). Gray, pred. medium grain, subangular, moderately-well sorted, clean, V. good P & P, Easily friable	S	3	1	3	1	1	1.5	2	1.8	
188			OSS: (DESATURATED), Gray, VFG. sub rounded V well sorted, clean. Good porosity, poor perm.	S	3	1	3	1	1	2	2	1.85	
200		OS	CLAYEY SILT: Gray, abundant mica faint HC odor. poor P & P		3	1	3	1	1	2.3	2	1.9	
206			OS. SILTY. V.F.G. SS = (DESATURATED), GRAY, clayey, poor P & P, faint HC odor micaceous.	2	3	1	3	1	1	1.75	2	1.8	
214			OS. SILTY SAND = A.A.	2	3	1	3	1	1	2.2	2	1.9	
227			OSS = (DESATURATED), V F G, Gray, Well sorted, sub rounded, good porosity, fair-poor permeability. clean.	3	3	1	3	1	1	2.2	2	1.9	

1503-P 7-58

FEB 16 1984

SHELL OIL COMPANY
DIVISION

SIDEWALL CORE RECORD

Date 5-8-1970

Type Sidewall Sampler Schlumberger

Cores Examined By N. DOGAN

Section 9 Twsp. 27S Rge. 28E SB. & M. MDB&M.

Area or Field MT. POSO

Well Vedder 12-15

DEPTH	REC	RUN	DESCRIPTION *	LITH SYMB	OIL SHOWS ** % Oil Stain	Hydrocarbon Odor	Sample Oil Fluor. %	Sample Oil Fluor. Inten.	Sample Oil Fluor. Color	Cut Color of Cut	Cut Color of Cut Fluor.	Summary Show No. Avg.	Summary Show Symb
231			OSS. Lower UFG. same as 227, some silt	3	3	1	3	1	1	2.2	2	1.9	
245			SHALE = Gray, Micaceous.										
264			OSS = (DESATURATED), Gray, Med. Grain, well sorted, sub rounded to Sub angular, easily friable. very clean. V.good P&P	S	3	1	3	1	1	1.2	1	1.6	
271			OSS (DESATURATED) A·A (264)	S	3	1	3	1	1	1.3	1	1.7	
279			OSS (DESATURATED). pred. M.G. some Coarse G. disseminated throughout. Well sorted. Sub rounded. Easily friable. P&P V. good. clean easily friable	S	3	1	3	1	1	1.2	1	1.6	
285			OSS (DESATURATED), Gray, pred UFG. Well sorted, friable. fair-good P&P. some silt.	3	3	1	3	1	1	1.4	1	1.7	
300			OSS: Same As # 285. Some fine Grains disseminated throughout.	3	3	1	3	1	1	1.2	1	1.6	

Symbol, % sand: C, 0-5%; 1, 5-30%; 2, 30-65%; 3, 65-85%; S, 85-100%.

** See Legend for Oil Shows (over)

1503-2 7-58

FEB 10 1984

SHELL OIL COMPANY
DIVISION

SIDEWALL CORE RECORD

Date 5-8-1970

Type Sidewall Sampler Schlumberger

Cores Examined By N. DOGAN

Section 9 Twsp. 27S Rge. 28E SB&M. MDB&M.

Area or Field MT. POSO

Well Vedder 12-15

DEPTH	REC	RUN	DESCRIPTION #	LITH SYMB	OIL SHOWS **									
							Sample Oil Fluor.			Cut		Summary	
					% Oil Stain	Hydro-carbon Odor	%	Inten.	Color	Color of Cut	Color of Cut Fluor.	Show No. Avg.	Show Symb
308			OSS (DESAT.) Gray, L M – UF G. Clean, easily friable, well sorted, sub rounded P&P = V. Good.	S	3	1	3	1	1	1.5	1	1.65	
315			OSS (DESAT). Gray, VFG, well sorted, sub rounded, fair perm, good porosity some silt.	3	3	1	3	1	1	2	2	1.7	
331			OSS (DESAT). Gray, pred M to Coarse Grain. fine grains disseminated throughout, clean, poor – fair sorting, sub rounded to sub angular. good P&P	5	3	1	3	1	1	2	2	1.7	
336			OSS (DESAT) pred LVFG, silty, conglomeratic, fair-poor P&P. clayey.	3-2	2	1	3	1	1	2.5	2	1.65	
343			OSS (DESAT). Gray, Med to Fine grained, moderate sorting, clean, easily friable, good P&P	5	3	1	3	1	1	2	1.5	1.8	
354			OS silt. LVFG sandy, Gray, micaceous, poor P&P	1	3	1	3	2	1	3	3	2.3	

Symbol, % sand: C, 0-5%; 1, 5-30%; 2, 30-65%; 3, 65-85%; S, 85-100%.

** See Legend for Oil Shows (over)